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JOHN W TAYLOR

Virginia Wildlife

*Dedicated to the Conservation of
Virginia's Wildlife and Related Natural Resources
and to the Betterment of
Outdoor Recreation in Virginia*

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COVER: The ruffed grouse is famous for his booming springtime drumming, but since he is more often heard than seen his strutting is less well known. Our artist, John W. Taylor of Edgewater, Maryland, has recreated a gem of wilderness splendor in this display that asserts the domination of an old male over all other grouse in his territory.

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EDITORIAL

Strong Remedy

THERE may be times in each of our individual lives when our continued existence on earth depends upon how well we heed the professional advice of a competent specialist—one whose ability to diagnose and prescribe stems not only from his own experience and observations but from a vast store of knowledge accumulated through years of scientific study and investigation by practitioners of the healing arts.

There are equally critical times in the rise and decline of wildlife populations, when it is not just relative abundance that is at issue but when the actual survival of an entire population is at stake. And so it is today with the wild turkey in eastern Virginia.

From a peak of relative abundance in 1960 the wild turkeys east of the Blue Ridge have declined in numbers so rapidly that nothing less than the survival of this greatest of game birds throughout the whole region hangs in the balance, and the end of turkey hunting in Piedmont and Tidewater Virginia for all time could be the price of ignoring now the advice of competent professional game biologists.

Back in 1958 the wild turkeys in this same area reached a somewhat similar but less critical low point after several years of declining numbers. In order to reduce the harvest of hen turkeys, and thus conserve essential breeding stock and halt the decline, game biologists recommended shortening the 1958 fall turkey season to one month and delaying the opening date until after the peak pressure, which always accompanies opening of general hunting, had subsided.

The combination of low turkey populations and the shortened and delayed hunting season in 1958 naturally produced the lowest turkey kill ever recorded in the state up to that time. The effect on wild turkey populations was little short of fantastic, and by 1960 the turkey harvest jumped to the highest ever recorded! And there was an excellent carry-over of breeding stock into 1961.

Since then, three successive nesting failures have occurred and eastern Virginia's turkeys are worse off than they were in '58. The "doctors'" reports have an ominous ring. Half the turkeys shot these past fall seasons have been hens, on whom the future of the species depends, and young birds of the year (by far the easiest to take when there are any to be taken) have been outnumbered by the old birds brought to bag.

Obviously, the "patient" is fighting for his life. The trouble has been accurately diagnosed, and the kind of "medicine" needed has been prescribed. Breeding stock, the life blood of the turkey population, is ebbing away. A drastically curtailed fall kill is needed to preserve enough breeding hens to take advantage of a good nesting season when one does come along, and a prayer that such a season is not too long in coming is not out of order either.

It is bitter medicine for the really dedicated fall turkey hunter, this drastic curtailment of the sport he loves so well, especially when those whose main interest is the pursuit of other game are free of similar restrictions; and the dose is made no easier to swallow when there is suspicion that a few of those who hunt other game may not be entirely scrupulous in observing the special restrictions that apply to turkey hunting. But the cure is *not* as bad as the disease, which if left to run its course could bring all turkey hunting in eastern Virginia to an abrupt end. Things are just that serious, and we have no alternative but to save as many hen turkeys as we can by restricting the fall harvest until there is a turn for the better.—J. F. Mc.

LETTERS

Boy Defends Hunting

A 12-year-old boy defended his belief in hunting in a letter to the Spokane, Washington, SPOKESMAN-REVIEW January 21 in answer to a letter condemning guns and hunting. The letter is quoted as follows:

I am a 12 year old boy and would like to comment on Mitzi Murkami's Forum letter about hunting game.

She must be a vegetarian. Doesn't she like chicken, beef or ham? She should maybe visit a slaughter house. Is this also legalized murder? No, it is a necessary way of life.

I like venison and pheasant. My dad likes to hunt. Our president likes to hunt. It is part of our American heritage. Our forefathers hunted. When I get a little older, I'm going to hunt.

In Biblical times lambs were sacrificed. Animals and birds were put on this earth for a purpose. I'm sure Mitzi wears shoes and gloves. Where does she think the leather comes from?

Some day she may be a lady and maybe want a mink coat. They don't grow on trees, Mitzi. Crusaders should stick to worth-while things, like sickness and poor people.

Mark Johnson

Remarkable Success

I am taking an additional subscription to your magazine for a turkey enthusiast in Louisiana who has been hunting with me for several years. I have found your articles very interesting and am particularly interested in spring turkey hunting, as it has proved a remarkable success in Mississippi where the flocks have increased in leaps and bounds. On one of my own places I have trapped hundreds of birds to distribute to other parts of Mississippi and Louisiana.

Hunters in Mississippi have found spring turkey hunting far superior to fall hunting and the thrill many times greater.

Fred A. Anderson, Jr.
Gloster, Mississippi

It is with deep regret that we learned from his secretary, Mrs. Gene Pittman, that Mr. Anderson suffered a heart attack three days after he wrote to us, and now lies buried on his beloved Longleaf Farms among the wild turkeys he loved to hunt so well. His turkey hunting friend, Outdoor Sports Editor Herbert Sandusky, writing in the Jackson, Mississippi newspaper, recalled the tremendous increase in turkeys on Longleaf Farms under Mr. Anderson's management, and the annual trapping of 25 to 40 of the birds for restocking other suitable areas. He credits Fred Anderson with having done more for wild turkeys than any other individual in the history of his state.—Ed.

EVERY DAY AN OPENING DAY!

By JIM McINTEER
Chief, Education Division

AN exciting new adventure in high *quality* trout fishing, and *for keeps*, begins this month as the Commission of Game and Inland Fisheries opens its first pay-as-you-go trout management program on Big Tumbling Creek in the Clinch Mountain Wildlife Management Area.

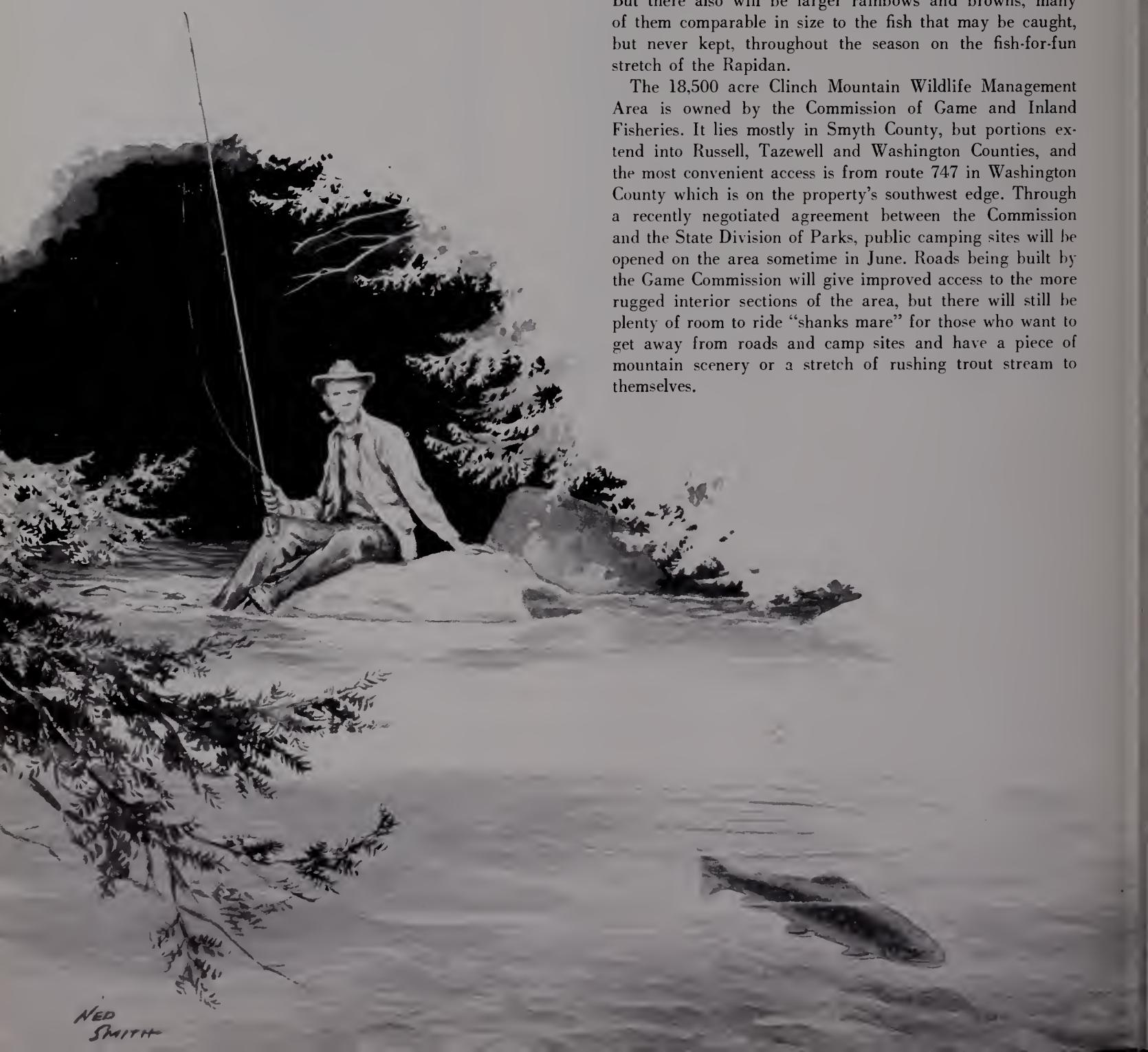
It is exciting, because good trout fishing always is, and good trout fishing is exactly what there is going to be in the Clinch Mountain Area all through the season.

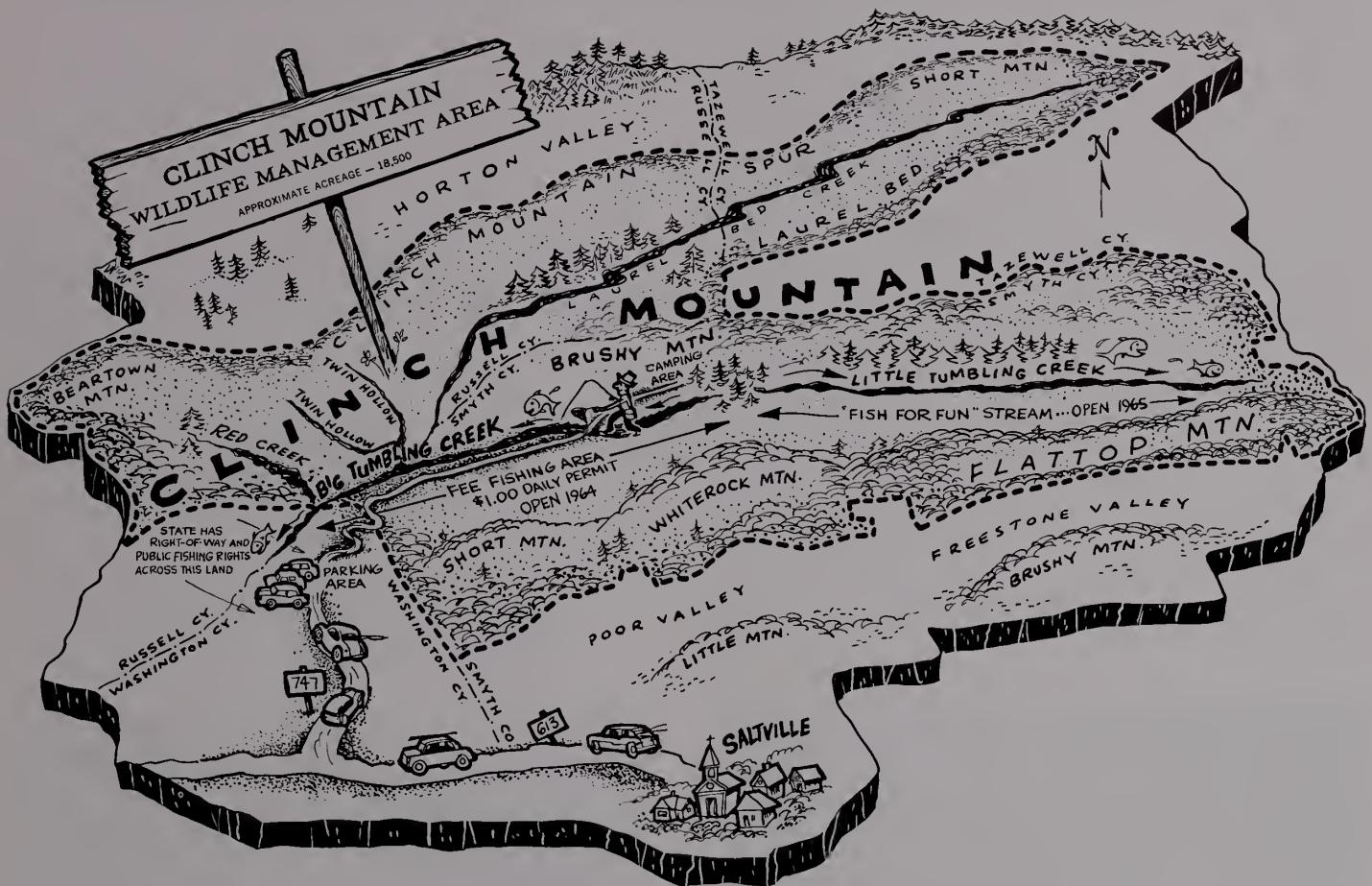
It is new, because it is the first thing of its kind ever offered Old Dominion anglers.

And high quality sport, that elusive will-o'-the-wisp that trout fishermen especially cherish, is assured by the combination, on a natural year 'round trout stream, of the best features of present "fish for fun" and "put and take" management techniques—a continuous supply of good fish guaranteed throughout the year, a reasonable limit of "keepers," and no mad opening day rush to yank out a creel full before the "other guys" get them all.

Big Tumbling Creek is well named. It is a wild, mountain stream that tumbles from pool to pool through a fantastically lovely wilderness setting. It always has had its natural population of native brook trout. They will still be there. But there also will be larger rainbows and browns, many of them comparable in size to the fish that may be caught, but never kept, throughout the season on the fish-for-fun stretch of the Rapidan.

The 18,500 acre Clinch Mountain Wildlife Management Area is owned by the Commission of Game and Inland Fisheries. It lies mostly in Smyth County, but portions extend into Russell, Tazewell and Washington Counties, and the most convenient access is from route 747 in Washington County which is on the property's southwest edge. Through a recently negotiated agreement between the Commission and the State Division of Parks, public camping sites will be opened on the area sometime in June. Roads being built by the Game Commission will give improved access to the more rugged interior sections of the area, but there will still be plenty of room to ride "shanks mare" for those who want to get away from roads and camp sites and have a piece of mountain scenery or a stretch of rushing trout stream to themselves.





This is how the pay-as-you-go fishing system will work.

As for the "pay" part, fishermen simply will be asked to pay a daily fee of one dollar (in addition to having a regular fishing license, of course) for the privilege of fishing in this particular area. Entry into the area is free, for any purpose other than fishing. There is a nominal charge for use of Division of Parks' facilities for camping out.

What makes the fishing different there from that on any other trout stream in the state (and well worth the dollar-a-day fee!) is the stocking program which will be continuous throughout the entire season. Nice, big trout will be released in Big Tumbling Creek at the same rate they are harvested by anglers, thus assuring about the same opportunity to fill a creel limit any day in June, July, August or September as in May.

There will be no assurance that every angler will get his limit every day. In fact, the fish biologists managing the program do not think that every angler will. But, in the name of quality sport, this is exactly as it should be. Some anglers will fill out the special creel limit of five "keepers," while some will not, and some may even get "skunked." But that's fishin'! Fish will be there, though—that's guaranteed! Undoubtedly the most skillful anglers will get a larger share than their less proficient but equally enthusiastic brothers. This is where quality and excellence, comparable to that found in fish-for-fun fishing, comes into the pay-as-you-go program. And the final reward, like that on

conventional put-and-take streams, is a string of gorgeous, fat trout to take home, or back to the campfire—if you can fool them, fight them, and land them.

Naturally there are a few special regulations to abide by. Trout fishing in Big Tumbling Creek began on April 4, along with the opening of the general statewide trout season, but the special pay-as-you-go plan, and its accompanying continuous stocking program, begins at 12:00 noon on May 2 and ends on September 7. After that, fishing still will be permitted, just as on other trout streams, until December 31 but without any special fees or special stocking to "sweeten the pot."

During May fishing hours on Big Tumbling will be from 5:00 a.m. to 7:00 p.m., Eastern Standard Time. From June through August the stream will be open from 5:00 a.m. to 7:30 p.m. The first seven days of September it will open at 6:00 a.m. and close at 6:30 p.m.

Daily creel limit is five trout, with possession limit on the area set at ten. Uninjured trout released *immediately* (not from net, strings, or creel) are not counted.

Each fisherman is required to use a separate stringer, creel or other container for his fish with the owner's name and address attached.

Special daily permits will be available at the entrance to the area on route 747. Regular fishing licenses, which are required, will not be available on the area but must be obtained from established hunting and fishing license agents.

WILDLIFE BIOLOGISTS IN ANOTHER STATE FIND MERIT IN

A NEW dimension in Colorado game bird hunting is now just around the corner for resident sportsmen. A spring "gobbler only" turkey hunting season has been set by the Colorado Game, Fish and Parks Commission, as recommended by State Game Manager Gilbert Hunter.

With the setting of a spring gobbler (tom) season, the state's hunting fraternity is in for a real treat—the ultimate test of hunting skill, knowledge of the woods and code of hunting ethics.

For spring gobbler hunting is not for the "meat" hunter, the sound shooter or the meat hog. Sheer fire power, abundance of equipment and overwhelming greed will not do.

The wily, cautious tom in the spring after the mating season is only for the hunter with infinite patience, consummate skill at turkey calling and a high degree of knowledge about the turkey, his habits and his home terrain.

With the mating season at an end and the hens on the nest, the tom is a nervous, cautious and alert individual whose senses are particularly sharp. He mostly travels alone in a definite area not too far from the roost tree. And he will scurry for the brush and safety at the slightest disturbance.

A hunter cannot "happen" upon a spring gobbler, cannot stalk him and cannot still-hunt hoping for one to wander by.

Spring gobbler hunting is done most successfully in the following manner:

First, the hunter must locate the roost tree and the area to which the gobbler is limiting himself. Then he must get out into this area before dawn and hide himself. When the tom comes down from the roost tree to feed and drink, the hunter must call the bird to him and the call must be that of the hen turkey. If the hunter has done all these things and is successful at calling the bird to him, he will have about five seconds to raise up, draw a bead on the bird and fire.

Spring gobbler hunting, therefore, will be the ultimate test of a hunter's ability, knowledge of the lore of the woods, understanding of the habits and skill of the tom, camouflage and imitation of the turkey call.

And for this reason, the harvest of spring gobblers will be low. States in which this type of hunt is held report success ratios ranging from 10 to 17 per cent. A harvest of 10 per cent of the tom population is about average.

"Spring gobbler hunting cannot hurt the productivity of the flock," said State Game Manager Hunter. "The harvest is too low to do anything but actually stimulate the breeding instinct of those toms left."

"It is safe to assume," he continued, "that only the toms will be taken during this spring season, for the toms are the only ones moving about. The hens are nesting. And the hunter will be lucky to see a tom, let alone worry about shooting a hen by mistake."

Hunter concluded that the beauty of this type of season is that it gives the sportsman an added hunting season, will not necessarily result in more turkeys being taken during the year for each hunter will still be allowed two turkeys during the three seasons (spring, and split fall seasons), and it will result in a more selective turkey harvest; that is, more surplus toms will be harvested.

"It is the old tom that we must take in greater num-

SPRINGTIME TURKEY HUNTING

By

BOB TULLY and PETE HANSSON

Colorado Department of Game, Fish and Parks

A MANAGEMENT TECHNIQUE PROVED SUCCESSFUL IN THE SOUTHEAST SPREADS TO FAR OFF COLORADO

bers," said Hunter, "for by removing the old tom, we will give new breeding stock, as represented by the younger toms, a chance to keep the flocks vitalized and improving."

"But because he is smart, alert and quick, the old tom is the hardest to take during the regular turkey season and we only harvest a few of these birds each year," Hunter stated.

He added, "The spring season should make him a little easier to find and take and will help in the proper management of the state's turkey flocks."

One of the questions always asked about spring turkey hunting is, will it not subject the flocks to too much pressure, ultimately reducing the populations and destroying the turkey as a huntable species?

According to game biologists the answer is no. The turkey is a polygamous bird and only a few toms handle the breeding chores, each one handling from five to ten hens. This means that of any ten toms, at least five are surplus and the number can reach as high as nine out of ten.

The state of Virginia, which has instituted spring gobbler seasons after exhaustive research, reports:

"A majority of the toms, physically capable of mating, are not permitted to participate in the activities at all. The spring gobbler population could be reduced by 50 per cent or more in most areas, without the slightest effect on annual reproduction."

Alabama, which has had spring gobbler hunting for many



Spring gobbler hunting is not for the "meat" hunter, and fire power is not the secret of success. It is the ultimate test of hunting skill, knowledge of woodland lore, and, above all, the ability to imitate the call of a wild turkey hen.

years, has revealed that in 1940 its turkey population was about 13,500. Since then, with both spring and fall gobbler seasons, its turkey populations have increased until this year they are estimated at 100,000, according to Ralph Allen, chief of Alabama's Game Management Section.

Virginia has reported some of its conclusions drawn from close observations of spring gobbler hunting. It reports that a close check was kept on two adjacent areas, one of which had spring gobbler hunting and the other of which did not.

Nesting success in both areas was comparable and hunter success in the fall was about the same in both areas. The

conclusion then was that under normal conditions spring gobbler harvests do not detrimentally affect the flocks nor do they hurt the hunting of turkeys the following fall.

Some of Colorado's biologists engaged in turkey studies have reported evidence that would support spring gobbler hunting.

One of the most respected turkey research men in the Colorado department was Martin Burget. In 1954 Burget wrote an article, "Turkey Comeback," in *COLORADO CONSERVATION* (now *COLORADO OUTDOORS*).

In the article, Burget reported that hunting seasons helped turkeys by making them less trustful and more alert. He reported that removing some birds from a flock stimulated the remaining birds and quickened the breeding instinct. And in concluding his article with advice to turkey hunters, Burget said:

"Take your time and get the turkey you want—preferably a big tom. We have more of these than we need."

Senior Game Biologist Gary Myers has been studying turkeys on the Uncompahgre Plateau for several years. His report to the Game Management Division disclosed the following facts:

"The sex composition of turkey flocks in the three areas on the Uncompahgre showed an excess of toms last winter. Of turkeys seen in the three areas, 46 per cent were toms. No more than one-third of these males was needed to main-



Commission photos by Kesteloo and Mosby

tain the productivity among these birds. If the three flocks are typical of turkeys on the entire plateau, the sex ratio is unbalanced and a spring gobbler season should be held.

"Of 117 turkeys killed on the Uncompahgre and examined in 1961 and 1963, seven turkeys or six per cent were adult toms. A spring gobbler season is necessary to properly manage turkeys on the Uncompahgre Plateau."

From all the evidence available, then, it is concluded that:

1. Since turkeys are polygamous, a majority of the toms are surplus and can be removed from the flocks without adverse effects.

(Continued on page 22)

Something of Value

By LEWIS BRANDT
State Game Warden, Rt. 4, Charlottesville

ALL over the state among sportsmen the characteristic atmosphere of another hunting season past prevails. Rifles and shotguns have been given coatings of protecting oils and packed away; and the stories conjured up around the potbellied stove at the country store grow shorter and fewer.

It is said in ancient proverb that in the spring a young man's fancy turns to love, and no one would ever doubt the truth of the saying. Yet to the sportsman the love that spring ushers in has a large place in it for fishing.

February and March are notorious winter months but mingled in with their snows and winds were a few warm days to remind us that spring was just around the corner. And even then the love of fishing already was at work, for still dressed in his vivid plaids and heavy coat of the hunting season we found the sportsman huddled on the river bank waiting patiently for a bite. Pausing for a moment to watch the figure on the river bank, one may ask, "Who is the man at the river's edge?"

Perhaps he is the true sportsman, and this is truly a grand breed of man. Challenge is his life's blood; and before the sun has even thought of giving a tent of purple satin to the east, he is well on his way to a quiet spot to tempt a big one. It is not uncommon to find him there as the moon begins its wanderings, and his casts still go out with enthusiasm. His closet at home will boast a rod and a myriad of lures for every species of fish known to man, and when these aren't enough he will set out to invent and manufacture his own. Hunting and fishing will never die because of people like him.

Perhaps the silent figure on the river's edge is the meat

fisherman. The name "meat hunter," "pot hunter," or "meat fisherman" is not quite so charming to the ear, for it does not ring with as much color. However, he is more often than not an honorable outdoorsman. Perhaps many of us would be surprised to learn the number of people who still depend on wild game as a source of family nourishment. The squirrel and rabbit stews, plus the two deer he is allowed, along with the other game and fish go a long way in keeping his family well fed. When he baits a hook, it may be that the hook he uses is a little larger and the line is a little heavier; perhaps his rod is a good stiff willow pole. He is not fishing to match his skill against that of the fish, but to get him on the table.

Perhaps the individual upon whom our thoughts are trained is the poacher. This is not such an honorable man; his sense of challenge or his appetite carry him well beyond the limit of the law. His rebellion against decency leaves a trail of deer killed at night and left in the field to rot to a dynamited trout stream where hundreds of fish are killed for a purpose we have yet to discover.

Finally, the one by whom the river slowly makes its way may be the searcher or the one who seeks a moment of escape. Not long ago I talked to a man on the edge of a large lake, and he was recovering from an illness. His doctor had prescribed all the fishing he could do as a means of healing the soul. I am reminded of a matchless story in the Bible. Peter was seated on the shore of the sea of Galilee with a very sorrowful and troubled mind. He was questioning the last three years of his life in which he followed Jesus Christ. He had made himself a fool for the man he believed to be from God. He believed that Jesus had eternal life and, even more, would give it to him; but suddenly and with what seemed finality, Christ was dead. This fact brought to the Apostle the keen edge of the sword of suffering.

It is of great interest the way that Peter responded to this situation that is common to man. His statement is among the magnificent statements of the Bible, "I go a fishing." Peter said he was going fishing, and the rest of the disciples said they were going too. There was a temple in which they could have sought God in prayer; there were upper rooms where they could have offered debate; but they all went fishing. Such a response only confirms my belief that fishing is an activity fit for disciples; it is clean, healthy and good. Whether it takes you to a mountain stream or to the rolling sea, it will acquaint you anew with the earth, which is the Creator's footstool.

I don't know what it is about the outdoors that heals the soul, and maybe we shouldn't seek to explain it too deeply and lose the spontaneity of it. However let us say this much. There is a beauty in the vastness of the outdoors that is seen in every forest pine that reaches for the clouds and is sung in every stream. It may be that in the bigness and beauty all about us, we ourselves seem small; this is good sometimes because when we look small so do the troubles that plague us. I believe that when a problem begins to look small, it means our vision is at last reaching a proper perspective, and courage to act can at last be sharpened.

Fishing in the outdoors is truly something of value, and as long as we care for this outdoors, nurturing it through conservation as though it were our offspring, there will be a place for the sportsman to answer his challenge, the meat fisherman to fill his table, and the searcher to renew his strength.

Commission photo by Kesteloo

VIRGINIA WILDLIFE



Soil Conservation Service photo

Harlen Senger checks in new arrivals at main entrance to lake. Beach area is in the background.

A RESERVOIR FOR RECREATION

By GORDON S. SMITH
Soil Conservation Service, U.S.D.A.
Upper Darby, Pennsylvania

FLOOD prevention was the main objective for Waynesboro's South River watershed protection project. But Augusta County Virginians found outdoor recreation an important by-product in their valley improvement effort.

The project is a segment of the tri-state Potomac River Basin flood prevention program. It got its start when Congressional action provided financial and technical aid for 11 flood-troubled U.S. river basins. Waynesboro folks, backed by the Shenandoah Valley Soil Conservation District, provided the necessary local sponsorship to give their project an early start. Upland conservation work by landowners, improved stream channels and a series of flood prevention dams were planned to relieve the costly flood problem.

Today, 12 of the 17 proposed dams are in place in the 156,700-acre watershed. Bottomland farmers, suburbanites and Waynesboro's multi-million dollar industrial complex are beginning to feel the benefits. Protection increases as each new structure takes shape. The new reservoirs formed behind the dams add recreation.

Several reservoirs have already been developed. One dam above Sherando Lake in the George Washington National Forest has almost doubled the area's recreation water. Another is now a children's camp sponsored by the Waynesboro Kiwanis Club. A new housing development surrounds still another reservoir. And a state prison camp gets fire protection, irrigation water and recreation for inmates from a flood dam built on its farmland.

When a dam formed Mountain Lake it was developed by Harlen A. Senger and his family. Today it's a complete recreation enterprise featuring swimming, boating, fishing, picnicking, camping, hiking and archery. Summer cottages are also available.

To accelerate the watershed project, Senger bought land and granted easements to construct a second flood dam.

Previous owners had balked at letting surveyors proceed. In years past Senger helped organize a flood rescue squad in Waynesboro. He had vivid memories of fishing dozens of people out of swirling flood waters.

Ernest R. Simmons, U.S. Soil Conservation Service farm planner in Augusta County, helped Senger plan the new property. The neglected woods needed thinning to weed out poor timber products. Erosion-scarred areas needed fresh plantings of white pine seedlings. Simmons advised. Wildlife food plots in odd areas would build soil protection and improve food and cover for wildlife.

While the Sengers worked on their tree farm improvements, the larger of two dams took shape near Greenville on U.S. Route #11.

"Before the dam was finished and the lake only half filled, people started using it for a picnic and swimming area," says Mr. Senger. "We didn't object to the free-loading and scattered litter too much. The big problem was the safety hazard. And, we were responsible if anyone drowned in the lake. It meant buying an expensive insurance policy to protect ourselves. The obvious answer was to turn our new water resource into a recreation business."

Developing the recreation center was a family proposition from the start. Earl and Kenneth, the Sengers' boys, worked at the lake with their father when they weren't in school. Their mother handled the bookkeeping. Soon, a sandy beach stretched along one side of the lake. Their timber-thinning operation furnished ample wood to construct two piers, a pavilion, dozens of picnic tables and firewood for visitors. Fireplaces completed the facilities.

Soil Conservation Service's Simmons helped Senger update his conservation plan to fit the new recreation needs. The soil survey map indicated a well-drained area for tent sites and the trailer park. Simmons recommended Kentucky 31 fescue as the ideal grass cover for heavy foot traffic on the archery range, playground and beachside areas. Fertilizer, applied generously in spring and fall, gave the cover a healthy, deep green growth.

On the hillside just above the dam, summer cottage lots were surveyed and staked out. Soil survey information

(Continued on page 20)

Senger Mountain Lake from the air, showing road net, beach area on the right, and surrounding forest land.

Soil Conservation Service photo



The Fox and the Fish

By CLAUDE ROGERS
Virginia Beach

ONE evening three sober (or so their affidavit states) striped bass fishermen from Eastern Shore Virginia, James D. Barnes, Harry Tull and Joe Sparrow, fishing in Drum Bay near Saxis, Virginia, sighted a red fox staring at them from the sandy shoreline.

"Watch him run," Joe said, as he cast his plug towards the fox. The fox ran all right—to the water's edge—in an apparent effort to capture the artificial lure which Joe was now reeling back towards the boat.

Jimmy Barnes said, "I wonder what he would do if I cast the plug on the beach where he could reach it." With this, Barnes cast a small popping type plug (Atom) to the beach within a few feet of the fox. The fox pounced on the hook-laden plug, pawing and mouthing it, but he failed to hook himself.

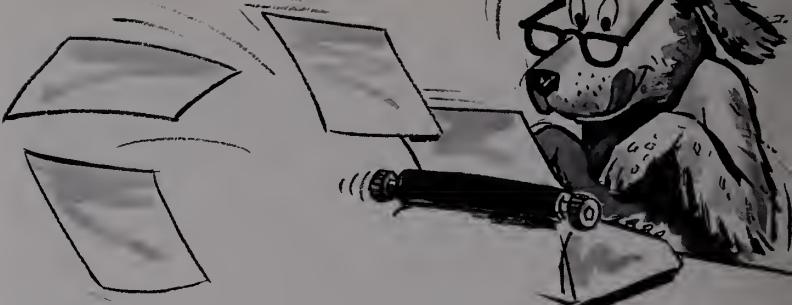
"Don't jerk the plug and set the hooks," Joe said, "or we'll lose the plug." Tull jestingly added, "And foxes are difficult to scale and fillet." The fox finally dropped the plug but continued to smack at it with his paw. Barnes, at his first opportunity, jerked the plug away from the frustrated fox and back into the water.

Harry Tull, a Saxis native, who says that he has seen foxes in this particular area on the average of once a week, suggested that they throw a fish to the fox as he was probably hungry. Joe Sparrow tossed Harry a two-pound striped bass he had just boated, and Harry heaved the fish shoreward, the fish falling approximately 15 feet from the fox. The fox rushed to the fish, picked it up, trotted off towards the bushes pausing long enough to give the anglers a backward glance as if to say, "Thanks for the dinner," before departing from the scene.



Commission photo by Kesteloo
"Thanks for the dinner."

When the three anglers were questioned regarding the likelihood of such a tall yarn involving one of nature's most cunning creatures and as to whether this event occurred before or after "toddy time" they all chorused—"Before! ! !," adding that they had just started out fishing and furthermore they were willing to sign an affidavit.



Paw Prints

By EV'S GUNNER
FDSB 633368

LAST night the boss and I spent the night in the country with some of the boss's friends. They have a little place surrounded by a good stand of pines, just the other side of suburbia.

The screening pines and the little man-made pond at the front door always cause the boss to get a little misty.

I had table scraps for dinner, rare in this dog's life.

Instead of my cosy rum-barrel home in the city I slept on an old rug in the kitchen. That is, I tried to sleep . . .

The men of the house were in and out at all hours of the night for milk, sandwiches, cigarettes and just out and out fat chewing. It has been my experience in this world of two-legged people that the difference between men and women is that the ladies must talk on the phone and the men need a glass of suds to lubricate their vocal cords.

And so it went until our quiet world was shattered by a terrifying tinny clamor outside. The three of us rose to investigate and the opened door allowed me to discover the air thick with deer scent. My human friends realized this only when a pack of hounds came rushing by in pursuit of the terrified deer that had overturned a lawn chair.

Our host allowed as how a man shouldn't let his dogs hunt on their own. Particularly on these spring nights. In the spring, for animals as well as for people, thoughts should turn to romance. Hounds run the game they were taught to run and are not really at fault. Their owners know better, though, and should see that they are penned.

On a fishing trip we saw a doe, heavy with her unborn fawn, seek escape from a pack of dogs in our favorite bass pool. The dogs were turned but she almost drowned. Too exhausted to pull herself out, she watched with wide eyes as the boss and his companion pulled her out and stood at a respectful distance (those razor sharp hoofs) while she got her breath, rose wobbily to her feet and disappeared into the brush.

Deer hounds (their owners) aren't the only ones guilty of not thinking. Rabbit dogs and bird dogs are allowed to drive young away from their protecting parents and break up nesting sites. We dogs don't have calendars, and so it's our bosses who have the responsibility of protecting this year's young so that they may be next year's game.

For most of Virginia's game, night time is the time of foraging for food and teaching the young how to survive. Open seasons and hunting times are established in an effort to protect wildlife and thereby obtain a maximum yield of hunting pleasure. Game needs this time of protection. It's up to all the bosses to see that they get it.

Fishin' Holes



Eighth in the series of articles on some of the favorite angling hot spots in Virginia.

Lower Chesapeake Bay Blues

By LOUIS BAIN
Hampton

IF you've got a hard-sell job on salt-water fishing—some one difficult to bring into the fold—give them a go at springtime bluefishing in lower Chesapeake Bay.

The millions of two-pounders, give or take some, that constitute the early run of blues along that shore probably provide one of the liveliest spells of trolling at its best in Virginia each season.

The run starts off slowly about May 1, but before the choppers move back out to off-coast spawning grounds by July 4, the supply and competition mounts to the point where participation becomes almost exhausting and in some cases seemingly dangerous. And the difficult and doubtful customer—the fellow you've been trying to convert—will agree after a day afloat amid the blues that he's never seen anything quite like it.

As you cruise back to the boat landing, his arms will weigh heavily as he stows his gear, and he'll actually feel glad that it's over because he doesn't know whether he could crank another blue aboard. He'll sleep like a babe that night, but the next morning he's the guy who will first suggest another trip out there where there's nothing but white gulls, blue skies, blue water and bluefish.

Actually, the blues sometimes come in earlier than May 1, appearing in scattered spots in the deep-water Thimble Shoal Channel and up in the warmer waters of Hampton Roads, and they often run in excess of three points. The average, however, runs about two pounds, which is plenty under the circumstances dictated by conditions, and reasonably productive fishing starts about May 1.

They continue to increase in numbers and activity up to the first week in July, when they move back through the capes to spawning grounds out at sea, meeting their heavier brothers who come up about mid-June to surge through bait-fish off the capes for a half month or so. This off-shore run includes blues up to nine or more pounds and it usually attracts many of the anglers who have been trolling in the lower bay for nearly two months, but it's another story,

one of very much shorter duration.

The lower bay blues seem to run up through the Thimble Shoal Channel sector, apparently attracted by the vast oyster beds on and around Willoughby Banks. Actually, these oyster beds are about 20 or more feet down, located in a pocket between the banks and Ocean View and Willoughby beaches. They extend north about three to three-and-one-half miles to the channel, and east about five miles from Willoughby toward Little Creek.

Choppers are known as bait-fish feeders, preferring as a rule the surface schools of shiners and bunkers. They'll tear back and forth through these schools of small fish for long periods of time, continually snapping and eating, leaving the parts that don't fit between their knife-edge sharp teeth for the gulls, squawking and diving above. When they're full, they do like the ancient Romans—wretch, and eat some more—just for the sheer love of killing and feeding.

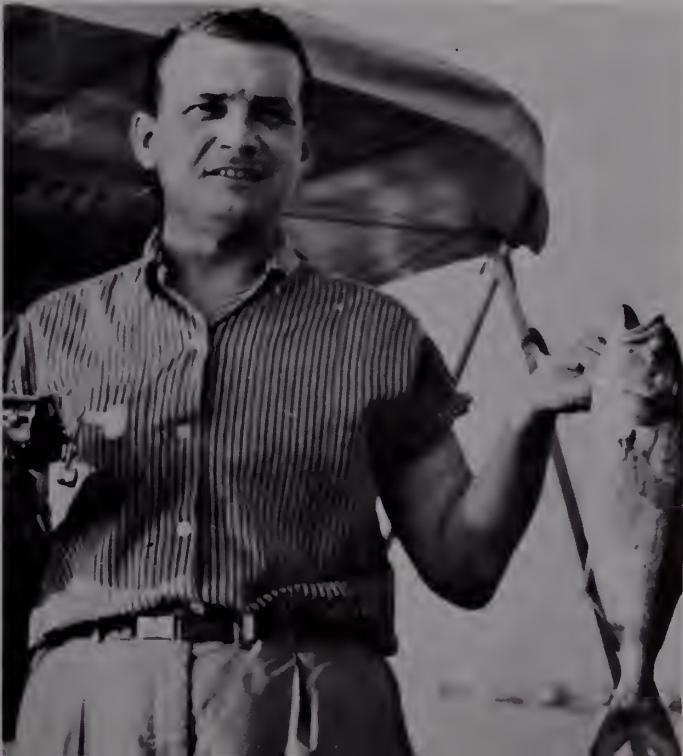
Despite this preference for surface feeding and frolicking in clear salty water, the choppers that first enter the lower bay seem to prefer action near the bottoms. In fact, the big schools of shiners and bunkers aren't even organized as the water temperatures run below 50 degrees. But it is believed they are attracted to the area by the vast oyster and clam beds, feeding off small marine life supported by the shellfish.

This seems to run contrary to the nature of chopper blues—that is, those in excess of the one-pound type, which are termed snappers. But the answer may lie in the fact that the one-pound snappers sometimes violate the habits of their bigger brothers by invading unclear water that has been cut in salt content by fresh-water drainage, and they'll feed on small marine life near the bottom.

These early-spring blues are just about a year or so removed from the environments and habits of the snapper blues, also called tailor-class blues, and probably are forced by their unsatiable appetites to resort to the habits of their salad days.

Then, too, the supply of anchovies, which continue as a delicacy throughout the life of a bluefish, also is on the
(Continued on page 18)

Gene Markham, Editor of the *Newport News Times-Herald*, displays a "chopper" he boated on the lower Chesapeake Bay.



MISSING ELEMENT:

"The Ethics of Community Life"

By ERNEST SWIFT

CONSERVATION issues continue to thrive on healthy debate. Certain new philosophies are making a bid to supersede and to challenge those of long standing. That is also healthy, and time will determine their validity. Truth does not change even though attempts are made to twist its meaning to fit current desires.

To me it is something of a mockery to eulogize the great names of pioneer conservationists and continue to ignore their prophecies and teachings. One frequently quoted is Aldo Leopold and a term he coined: "The Ecological Conscience." In 1947 he gave an address under that title. The following are excerpts of what he had to say:

"Everyone ought to be dissatisfied with the slow spread of conservation to the land. Our 'progress' still consists largely of letterhead pieties and convention oratory. The only progress that counts is that on the actual landscape of the back forty, and here we are slipping two steps backward for each forward stride.

"The usual answer to this dilemma is 'more conservation education.' My answer is by all means, but are we sure that only the volume of educational effort needs stepping up? Is something lacking in its content as well? . . .

"The basic defect is this: we have not asked the citizen to assume any real responsibility. We have told him that if he will vote right, obey the law, join some organizations, and practice what conservation is profitable on his own land, that everything will be lovely; the government will do the rest.

"This formula is too easy to accomplish anything worthwhile. It calls for no effort or sacrifice; no change in our philosophy of values. It entails little that any decent and intelligent person would not have done of his own accord. . . .

"No important change in human conduct is ever accomplished without an internal change in our intellectual emphases, our loyalties,

our affections, and our convictions. The proof that conservation has not yet touched these foundations of conduct lies in the fact that philosophy, ethics, and religion have not yet heard of it.

"I need a short name for what is lacking; I call it the ecological conscience. Ecology is the science of communities, and the ecological conscience is, therefore, the ethics of community life. . . .

". . . The practice of conservation must spring from a conviction of what is ethically and aesthetically right, as well as what is economically expedient. It is right only when it tends to preserve the integrity, stability, and beauty of the community, and the community includes the soil, waters, fauna, and flora, as well as people.

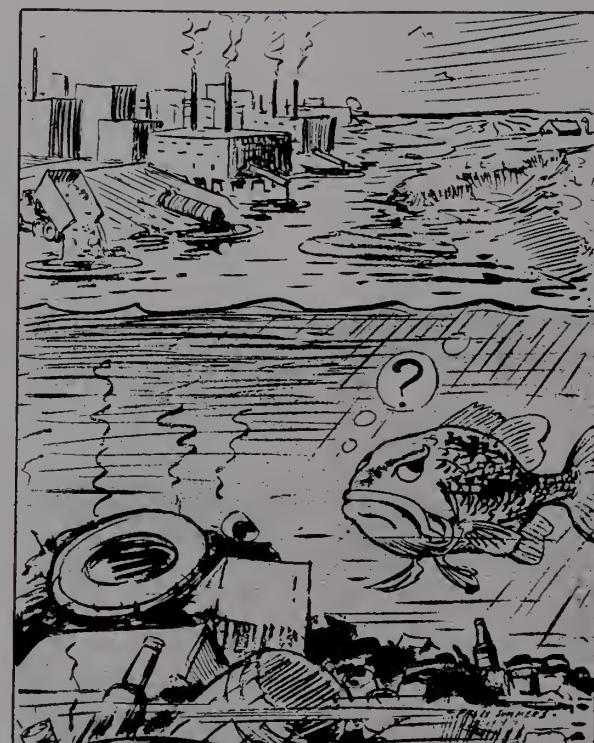
"It cannot be right, in the ecological sense, for a farmer to drain the last marsh, graze the last woods, or slash the last grove in his community, because in doing so he evicts a fauna, flora, and a landscape whose membership in the community is older than his own, and is equally entitled to respect. . . .

"It cannot be right, in the ecological sense, for the deer hunter to maintain his sport by browsing out the forest, for the bird hunter to maintain his by decimating the hawks and owls, or for the fisherman to maintain his by decimating the herons, kingfishers, terns and otters. Such tactics seek to achieve one kind of conservation by destroying another, and thus they subvert the integrity and stability of the community.

"If we grant the premise that an ecological conscience is possible and needed, then its first tenet must be this: economic provocation is no longer a satisfactory excuse for unsocial land use (or, to use somewhat stronger words, for ecological atrocities).

". . . I have no illusions about the speed or accuracy with which an ecological conscience can become functional. It has required 19 centuries to define decent man-to-man conduct and the process is only half done; it may take as long to evolve a code of decency for man-to-land conduct. . . . Cease being intimidated by the argument that a right action is impossible because it does not yield maximum profits, or that a wrong action is to be condoned because it pays. That philosophy is dead in human relations, and its funeral in land-relations is overdue."

(I heartily recommend that the present-day variety of *picnic table conservationists* give these remarks of Leopold's some serious thought.)



Courtesy Keep America Beautiful, Inc.

CONSERVATIONGRAM

Commission Activities and Late Wildlife News . . . At A Glance

WATERFOWL GAINS PROMISING BUT NOT SPECTACULAR. The results of the 1964 mid-winter waterfowl count released by the U. S. Fish and Wildlife Service show Atlantic Flyway diving ducks up 24% and puddle ducks down 3% compared to last year's figures. Mallards and black ducks, the two most important puddle ducks in the Flyway, were up 4% and 13% respectively. The decline which knocked the average down occurred mainly in blue-winged and green-winged teal, shovellers and baldpates. No reasons were given for the decline but there was much less frozen water during the 1964 survey than in 1963 allowing more of the birds to retreat into marsh cover and wooded swamps where they are nearly impossible to count. Teal and shovellers are especially fond of these areas.

Diver populations which have been dangerously low for several years seem to be improving nicely, although the gains of 9% in redheads and 16% in canvasbacks are not spectacular. Ringnecks have made the most remarkable gains showing a 25% improvement over 1963 figures and doubling their numbers since 1962. Their current level is 62% above the 10 year average. Most important diver species are now at or above the 10 year average.

Canada geese are still showing a strong increase putting them 28% above the 10 year average and up 11% from 1963. Brant were up 5% from last year but are still 8% below the 10 year average.

The Virginia-West Virginia-Maryland-North Carolina section contained 6.6% of the Atlantic Flyway waterfowl when the survey was made in early January, a 23% increase over these states' share in 1963. Virginia's borders contained 77,830 ducks and 61,312 geese. Large numbers of canvasbacks were noted on the Potomac River and upper Chesapeake Bay indicating that improved pollution control may be bringing back food plants in these waters.

381 BEARS TAKEN IN STATE. Game Commission tag returns show that 381 bears were taken in Virginia during the 1963-64 season, according to Game Division Chief, R. H. Cross. This is the largest bear kill in the Old Dominion since the tagging system records were initiated. The previous high was during the 1959-60 season when 361 were killed in the state. The 1962-63 total was 339.

Rockingham County with 63 had the highest total last fall followed by Augusta with 47, Botetourt with 37, Alleghany with 35, Bath which recorded 30, and Amherst with 23. Bears were tagged in a total of 24 counties, but those listed above had by far the highest totals.

In the Dismal Swamp Area 7 were reported from Norfolk County and 9 from Nansemond for a total of 16. Bear numbers have been low in the swamp for several years, but this was a considerable improvement over last year's bag of 3.

OLD DOMINION ARCHERS BAG 266 DEER. Bow hunters bagged 266 deer in Virginia during the 1963-64 season, a slightly better record than the 245 chalked up the year before. Of these, 162 were taken west of the Blue Ridge and 104 were checked in eastern counties. Pulaski County seemed to be the hot spot for the bow benders where they bagged 33 deer, followed by Augusta where they took 22 and Patrick where they downed 19. The best record for the archers so far has been the 1961-62 season when they managed to bag 326 deer in the state.



<p align="center">COMMONWEALTH OF VIRGINIA COMMISSION OF GAME AND INLAND FISHERIES CERTIFICATE OF NUMBER</p>	
<p>EXPIRES JUNE 30 1966</p>	
<p align="center">YOUR NAME MAIN STREET ANYWHERE, USA</p>	
<p align="right"><i>Chesler D. Chapman</i> CHESAPEAKE, VIRGINIA 23332 PHONE 33-5150, GAME AND FISHING 4-5181</p>	
<p align="right">REGISTRATION NUMBER VA 0000 Z</p>	
<p align="center">NO. OF BOATS OWNED 1837</p>	<p align="center">NAME OF BOAT AND PRESENTING FISH CHRIS CRAFT</p>
<p>16' LENGTH</p>	<p>W. OB. GAS PLEAS</p> <p>(mark) (mark) (mark) (mark)</p>

MUST BE CARRIED ON BOARD AT ALL
TIMES WHEN BOAT IS IN OPERATION.



YOU ARE RESPONSIBLE FOR DAMAGE CAUSED BY A WAKE FROM YOUR BOAT.



REQUIREMENTS FOR FIRE EXTINGUISHERS AND SOUND MAKING DEVICES DEPEND UPON SIZE (class) OF YOUR BOAT.

BOAT NUMBERING FOR PROPER TOOL IN ENFORCEMENT



ARE YOUR NUMBERS



RIGHT VA

CHARACTERS NOT LESS THAN VERTICAL —

Color must be of a color which will other



RIGHT

VA-1234-Z

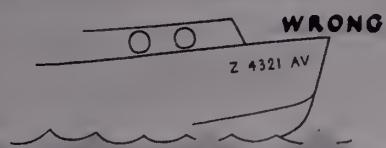
VA 1234 Z

HYPHEN OR EQUIVALENTS THREE PARTS OF THE NUMBER

"Boating Laws are for Your Safety"



IDENTIFICATION IS AN ESSENTIAL
BOAT SAFETY LAW.



DISPLAYED CORRECTLY?

WRONG

VA/2a

THREE INCHES IN HEIGHT
NOT SLANTED

Contrast with the color of the background.



WRONG

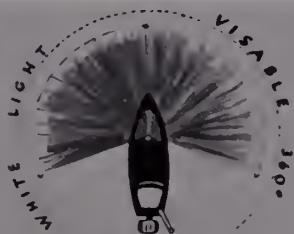
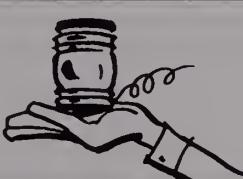
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NOT SPACE BETWEEN THE
NUMBER.



**AN APPROVED
LIFE SAVING DEVICE FOR
EACH PERSON ON BOARD**

SKI BELTS ARE NOT APPROVED



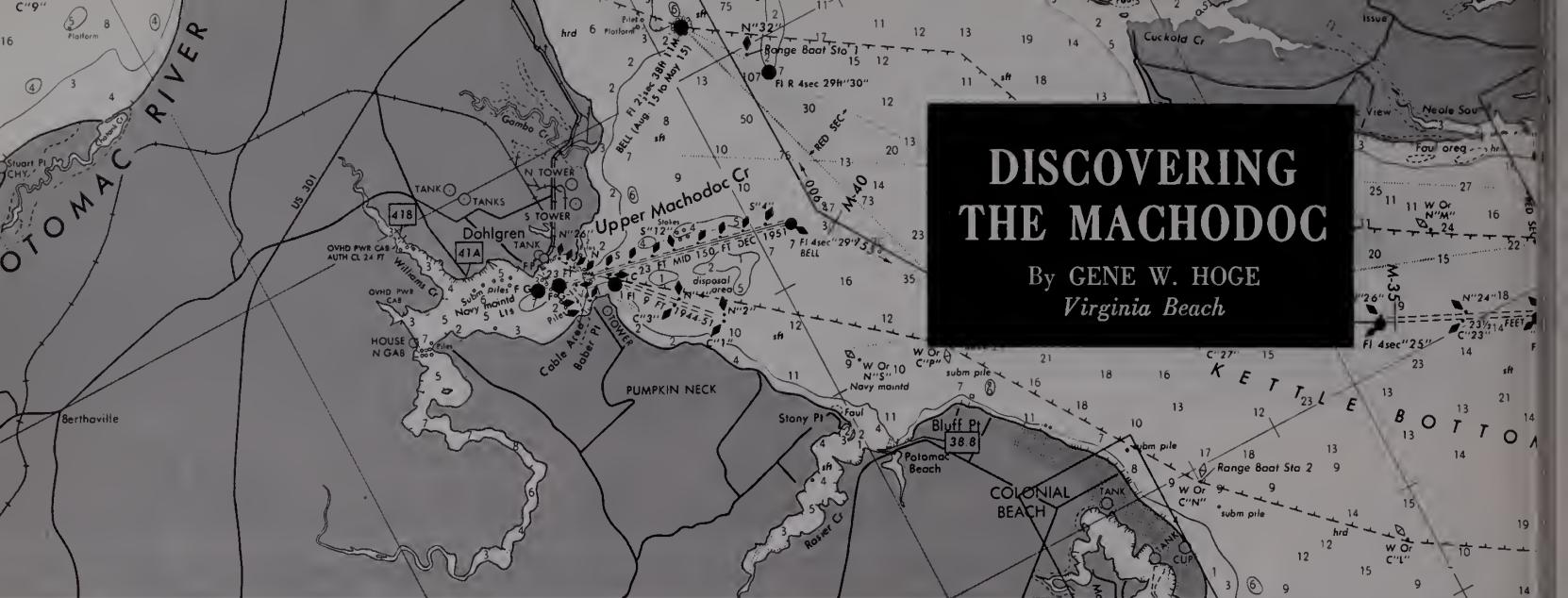
**LIGHTS MUST BE DISPLAYED
BETWEEN SUNSET AND SUNRISE**



**LET'S REMEMBER.
FOLKS -**

**ALL IT TAKES
IS....**





DISCOVERING THE MACHODOC

By GENE W. HOGE
Virginia Beach

PICTURE yourself anchored in a quiet harbor, lying in the warm sun and dangling your empty hook over the side of your boat, hoping you won't get a bite. There is such a snug harbor only forty nautical miles from Washington, D. C.

By this time many of you who travel the Potomac River are guessing at names of various popular harbors which are situated along the river. But this is not one of the popular landings which is normally visited. It is affectionately known to those who have discovered it as the upper Machodoc Creek.

Perhaps one reason the Machodoc is not frequented by more boating enthusiasts is that its entrance is obscure. From the normal river's channel Virginia's shore line appears to be a solid span of green growth. If the boat owner will check chart #556 as he passes under the beautiful Potomac River bridge and eases beyond lower Cedar Point Light, he will find that the Machodoc's entrance channel is only one and one-half miles farther south. Bearing to starboard at the #4 Red Spar channel buoy and heading almost due west, you feel at first you will surely run aground on the shore in front of you. However, as you get closer to the creek's entrance, you begin to see an opening ahead. As you pass the white mid-channel buoy, the ten foot deep channel opens before you until at last you enter the Machodoc. Before you lies the one-half by two mile Creek's mouth, an expanse of calm water protected by trees on all sides. To the center starboard is a covered marina where you can obtain the usual needs: gas, oil, and drinks. However, there is no yacht club or fancy restaurant; just nice people. At the marina you will meet crabbers and fishermen: men who make their living from the water, men with deep wind-blown tans and fog-piercing eyes, men short on formal grammar and long on helpfulness.

Always of interest to the boater is the fact that the Machodoc averages from six to seven feet deep at low water, except close to shore. For amusement, if you tire of talking to the friendly fishermen, there is fishing for yourself. In the Machodoc there are the delicious white perch in abundance, also catfish, sunfish, an occasional spot or striper, or if you are interested, snapping turtles and eels. If you happen to be equipped with an old chicken neck, some string, and a net, you should have no trouble dining on crab. If you need fishing bait, it is easily obtainable from the fishermen or the marina.

If exploring or "gunk holing" appeals to you, it can be found here also. Near the west end of the Machodoc's mouth there are two branches. One is to the north and travels about two miles up to a low highway bridge. Along this branch, called Williams Creek, are houses on the starboard side with another smaller marina and on the port side is cattle grazing land. This channel gets more shallow past the small marina, about three feet deep. It is wise to go slow, particularly at low water. The other branch winds away from the Machodoc's mouth and is the source of the Machodoc. It flows from the southwest and is as deep as the body of water it feeds, six to seven feet. This tributary is rather twisting, but the channel runs nearly true to its center. In the first mile you will pass several white houses, mainly those of fishermen. Even someone's own paradise: a house on a tree covered island appropriately named Wood Island. This channel may be followed for miles, and then it begins to grow narrow. After the first mile the water turns from "brackish" to nearly fresh. In this fresh water you can tackle a largemouth or a smallmouth bass or a pike. As you move up into this branch, the houses become fewer until finally there are none. You are alone except for an occasional jumping fish, or a startled blue heron flying away from his one-legged stand. By this time if your boat is over twenty feet long, you will have some difficulty turning around just any place. But, the Machodoc does keep giving you repeated chances as it widens around the reed covered bends. Though the channel is narrow here, two boats would not have trouble passing since it is now deep all the way to the bank's edge.

If you can spare the time this is one "gunk hole" you should not miss. The places are becoming fewer each season where a man may go and smell the clean air, see the gulls flying, hear the songs of birds, and see a muskrat which is not part of milady's coat. All this natural wildlife in a setting of rolling hills, woods of oak and pine, and the bleached skeletons of huge cedar trees along the banks. Here the rustle of marsh reeds becomes the tuning of an orchestra to the city dweller. What nicer way to end your weekend trip, than to wake up in the morning to a fresh breeze blowing your cabin curtain, and to listen to the lapping of the current against the boat's hull. It is the kind of place that gives you the feeling when you leave, "maybe I shouldn't tell anyone about it, and save it for my own personal escape."

The Paulownia Tree

By A. B. MASSEY
V.P.I. Forestry and Wildlife

IN April or May upon the arrival of spring the Paulownia (also known as the princess-tree) puts forth clusters of large light violet flowers in advance of the leaves. During the flowering period the dark seed pods of the previous season are conspicuously present. Two flower clusters together with old seed pods are shown in the accompanying illustration. By the time the leaves have become conspicuous over the tree the flowers have fallen and the green seed pods are apparent along with the old ones. The light violet flowers are about two inches long with darker spots and yellow stripes inside. They resemble the flower of the foxglove. The large mature leaves are suggestive of the catalpa leaf. Botanists differ as to which the Paulownia is the most closely related; however, it is placed in the figwort family (*Scrophulariaceae*) which includes the foxglove and catalpa.

The Paulownia was introduced some years ago and has become naturalized in the southern states. North of Washington, D. C., the flower buds and even the tree may be winter killed. In winter the fuzzy light brown flower buds are attractive and are often included in winter arrangements. The leaves have long petioles, the blade is somewhat oval, slightly lobed, six to twelve inches broad and slightly hairy on the surfaces. Single stemmed sprouts, from stumps, grow erect and develop leaves with blades 12-20 inches across. They are rather ornamental, lending a tropical effect. The tree is round headed, 25 to 40 feet tall with stout spreading branches.

The name Paulownia is in honor of the former Princess Anna Paulowna of the Netherlands. There are ten or more



The light violet flowers resemble those of foxglove.

species in China. The species which has become naturalized with us is *Paulownia tomentosa*. It is said to have been commonly planted in the Japanese temple grounds and that conventional designs of the flower buds appear in embroidery or imperial robes and as figures in the crown. The unsightly shells of the previous season's fruit remain on the tree in bunches through much of the following season. One should consider the feasibility of removing the young pods as soon as the flowers have fallen and before the leaves have developed enough to hamper their removal.

Propagation may be by seed or cuttings from green stems or roots. When a tree is cut down, vigorous sprouts with large leaves develop from the stump, attaining eight feet or more in one season.

TROUT THRIVE UP WHERE POTOMAC WATERS FLOW CLEAN AND COLD

UP near Possum Trot in the high headwaters of the Potomac in Virginia thrives a business that would be dead overnight were it not for the purity of the water it uses.

The enterprise is the Virginia Trout Company, located six miles from Monterey (and just a hoot 'n a holler from Possum Trot) in Highland County. The hatchery began operation in 1961. It straddles Strait Creek, a stream fed by a fabulous 1,800-gallons-per-minute spring. Strait Creek is a tributary of South Branch Potomac in a beautiful mountain section where headwaters of the James and Ohio Rivers also originate.

The hatchery, headed by Bruce Richardson, raises and processes rainbow trout for sale to restaurants and markets, and for private stocking in streams for anglers to have a field day. It is believed to be the only business of its kind east of the Mississippi River.

Mr. Richardson's operation has more than one unique aspect. While the water supply of the cold clean water that trout love so well is plenty for the hatchery's twelve large raceways and two ponds, it was decided that more water space was needed if production was to reach to trade volume visualized. Consequently, the company negotiated with neighboring farmers whose land was also blessed with clean streams, and obtained leases to use their water for raceways to stock the developing trout. All the farmers had to do besides "lend" the water was to feed the fish twice a day. For this cooperation the company pays the farmers a certain fee per pound at the time the mature fish are harvested.

Another feature of the operation is designed to bring in added revenue to the company, and untold joy to sport fishermen. The two one-acre ponds on the hatchery grounds are open to anglers, who, for a modest daily fee *plus 9 cents per ounce*, many catch all the trout their skills will allow.

Two nearby streams, moreover, have been leased and stocked by the firm. Fly fishing only is permitted at a fee of \$3.25 per day. The angler may catch all he can, on condition that he turn loose all but four rainbows of his daily catch.

From Interstate Commission on the Potomac River Basin News Letter.

Lower Chesapeake Bay Blues (Continued from page 11)

upsurge near these oyster beds during the spring months.

It's under these circumstances that the bluefish trolling season opens in the lower bay, and it proves real sport for the veteran fan, who likes a little challenge with his fun. Since the blues aren't surface-feeding, there are no gulls to signal the whereabouts of the fish. And that proves a two-dimensional task in that you not only have to find the spot—east, west, north or south over an area of 15 or 20 square miles—but the right depth, strictly an up and down problem.

It's better at this stage, though, to rig up before we start out. Most of the fellows who work these bluefish grounds troll with heavy lines, ranging from 20 pound monofilament up to 30 and sometimes 40 pounds. This seems unsporting at first glance, but there are reasons. In the first place, there usually are two or more men in the boat, and the schools—the area of a likely hit—are relatively small considering the movement of the boat. So when a tough two- or three-pounder hits your lure, you can't stop, lest you put your companion out of business. You have to crank the chopper in against the forward movement of the boat, and you have to troll your boat faster for blues than you do for rockfish. And don't let anyone tell you a bluefish of this size can't put up a fight that'll make a rock of the same poundage look like a sissy.

Yet you can't give these blues an inch—or they'll take a mile. Slack up for one second and these choppers will break water and spit the lure right back in your face. For that reason, most of the bluefish clan working these waters also use high-speed reels, those of at least three-to-one and preferably four-to-one ratio.

The other factor requiring the fast reels and the heavy lines that can stand the "horsing" that is necessary to boat the blue is the heavy traffic that's likely to appear from seemingly nowhere the minute you're seen boating your first catch. As the season gets along, this traffic can mount to the danger point and you have to get your fish aboard within a minute or two after he's hooked, or you're likely to lose your chopper and your rig, too.

Varying lengths are used for trolling, some claiming 100 feet is enough, and others swearing that 150 feet produces twice as many fish. As a rule, though, 100 feet is a minimum, and that makes a lot of line to reel in when boats are cutting back and forth off your stern and bow. Thus, the fast reel for "horsing" and the heavy line to stand the punishment.

Probably half of the bluefishermen troll with spreaders, a rig of tough steel about 15 or 20 inches across, that will permit you to troll with two lures on each line. This is particularly helpful early in the season when you have to search for the blues, as it increases the amount of flash beneath the water to catch the eye of the fish. Two men trolling with spreaders can thus set up a pattern of four flashing lures. But these spreaders also increase the need for heavy line as the blues lend truth to the theory that fish will flock after another one that has been hooked. Often after one blue strikes, you are jolted by the second one within 15 feet after the line has begun to come in.

So you're ready to take out after the blues, say along about the second week in May. It might be a good idea to start out by the clam boats just south and east of Fort Wool, which lies midway between Willoughby Spit and Old Point, say two miles out from the south shore. Troll east, like we

said, at a clip slightly faster than you'd move for rockfish. Best lures usually are the No. 4 Barracuda Reflecto spoon or the Hopkins lure of the same size. Sometimes a piece of yellow hooked pork rind on the end of the lure will add to the activity, which usually is down deep at the beginning of the season.

This is going to be "blind" trolling in that there is no visible indication of where the choppers might be, such as diving gulls or surface bait-fish to lure them to the top. They're down there somewhere, feeding on the marine life over the oysters.

Patience is the first requisite, plus a bit of skill and know-how, and although the fish obviously aren't trying to outwit you, it is probable that all the know-how you've picked up won't work today, simply because all fish are unpredictable. Then, maybe it will.

So the procedure we're going to follow, let us say, is based on previous experience. It is an attempt to apply logic to the illogical blues; it's not presented as know-how.

Let's troll on an east-southeast course, between the shore and the channel, starting out near the channel and working our way back toward shore with each turn-around. This is on the outside edge of the oyster beds, and we started here because the tide's turning out. There are some who swear that the blues hang around the outside of the beds at this time to catch the marine life that washes off over the shellfish. At times, I've found they were 100 per cent right, but at other times, I've had grave doubts about this. On an incoming tide, we'd start on the inside of the beds.

Since we're trolling with spreaders, two spoons on each line with 24-inch leaders, suppose I hug the bottom with a six-ounce trolling sinker, and you go a little higher with a three-ounce. The waters range from 15 to 25 feet. Maybe that'll help locate blues, and when we do, we'll both troll at the same depth, each with the 100-foot spot on our lines marked so we can set up a pattern of four flashing spoons in the same area, and at the same level.

Watching the water tank over at Ocean View, or the shoot-

A nice pair of blues boated by Everett Jones of Hampton, taken off Ocean View.



the-shoots, we'll work down that way, turn around, and work back, moving in closer to the shore.

Working through the morning, it might be one hour, or two, but we probably will hit the blues. When we do, we simply circle the area and work it until the blues quit, and each time they slack off, we'll change our depths until we find 'em again.

During such a day, a catch of 15 to 20 blues, running two pounds or better, is average. And you'll locate them several times in the course of the day, and lose them again.

Early in the season, there probably will be six or eight other boats working and it's a good idea to keep your eyes on the other fellows. If you see them cranking in, watch to see whether they boat a fish. If it's a chopper, get over there, working the same line, but not close enough to disturb him, or break up his fun. There's enough water and enough fish for everyone without crowding.

There also is one theory that I have been entertaining, but can't prove out too convincingly. That concerns cloudy days. The blues, of course, hit when they are hungry, and that's almost every hour of every day. But the problem is getting a lure down there that they can spot.

For that reason, I suggested both the Barracuda and the Hopkins. The former is a chrome plated affair, which sets out a lot of flash when the sun's up, and I believe it does the best job on a clear day. But for some reason, the Hopkins lure, which has a hammered surface, seems to work better when the sun ducks behind a cloud. Probably it is because the hammered surface on it beads up the water more, which is fairly visible to the fish regardless of sunshine.

At any rate, there was a morning early last May when I went over there with Dick Hart of Hampton. We were trolling new Barracuda spoons, working near three or four clam boats, near Fort Wool. It was a cloudy day, and we had not had any luck. Then with the sun up momentarily, we had three strikes in rapid succession. The sun disappeared, and the blues cut off, although we continued to work the spot for a half-hour. We watched one other fellow boat

Irvin (Lucky) Rosenbloom of Baltimore and Everett Jones display part of a May catch of more than 60 bluefish taken during a slight "northeaster."



about six, using a Hopkins, in that time.

Take this for what it's worth, but it's always a good idea to have a couple types of lures in your box.

That's blind trolling, recommended for the sportsmen who want to give their patience a workout. But the fun is more rewarding when you get a strike. Maybe it's because of the long fruitless periods, but it seems when a chopper hits your line during the early part of the season it's more electrifying to you, and to all aboard the boat. And since the blues, particularly at this size, are lively tough scrappers, you can take your time if you want, and play the fish, using a lighter line.

Along about June 1, the small bunker schools put in their appearance, along with the great hordes of shiners, feeding on plankton near the surface. When the blues spot one of these schools, they charge forth, driving the bait-fish to the top. Gulls, constantly searching for food, spot the surfaced bunkers or shiners, squawk the news to the other gulls, and plunge into the affray.

It is then that the bluefish trollers begin to scan the surface on a full 360-degree range, watching for the dark spot on the horizon indicating diving and feeding gulls. When they're spotted, the boats head that way. Other boaters simply watch their companions, and when one troller suddenly hits out like he's late for supper, the others follow.

By the time you arrive, the sky sometimes seems darkened by the diving and fussing gulls, and the surface beneath is dotted by a vast armada of boats. As the season progresses, as many as 30 or 40 boats will try to work a five-acre area where the blues and gulls are having dinner.

That's the time when you need the 30-pound line that can stand the fast retrieve of a four-to-one reel, against the pull of a couple two-pound blues and the forward motion of the boat. That is, if you want to get the fish aboard without losing a couple dollars' worth of gear.

Unfortunately, in a crowd of 30 or so boats, ranging from 14 footers to big Harkers Islanders and cabin cruisers, there always are a couple or so that don't want to follow the rules of circling just outside the feeding area so as not to disturb the sea food dinner working inside. They'll full-throttle right up to the edge, cut their engines, drop their lines overboard, and troll right through the melee, ending the party and probably cutting a couple trollers' lines at the same time.

It's then that you wish there was such a thing as a sea-going traffic cop.

But the big crowd seems to come out in the late afternoons. The early morning hours, when the blues are just as likely to be feeding, can be just as productive, and much quieter.

Last June, for example, Everett Jones of Hampton took two Richmonders, Mr. and Mrs. W. W. Harvey, Jr., and me, out in his 25-foot Harkers. We'd hardly cleared Fort Wool west of Ocean View as the sun, hardly a half-hour up, shone on the tell-tale feeding gulls. We arrived on the scene and had the whole party to ourselves, boating 56 bluefish in 45 minutes, and it wasn't until the last 15 minutes that one other boat joined the fun.

One of the best things about these lower bay bluefish is that they're just the right size to fillet nicely into pan-sized servings of the best tasting seafood this side of Pompano Beach—as long as it's served with a pan of cornbread and a very small helping of fried potatoes.

A Reservoir for Recreation

(Continued from page 9)



Soil Conservation Service photo

Boy Scouts rent a lakeside area and part of the lake for summer camping.

noted the area was suitable for septic tank sewage systems. A pipeline, fed by a 568-foot-deep well, supplied water to the entire development. Nine miles of improved contour roads and three miles of new firebreaks made the 1000-acre woods accessible for hunting and nature study. Smaller trails for hikers connected the area with the adjacent George Washington Forest. As an added safety feature, the Sengers bulldozed several roads from the lake up to higher ground.

"If a big storm dumps a lot of water in the 2700-acre drainage area behind the dam, our 13-acre lake could rise 34 feet as it stored excess flood water," says Senger. "The roads are placed so that anyone can walk up out of the lake area quickly if the water starts to rise."

"The grass and woodland management work at Senger's Lake serves a dual purpose," notes Simmons. "It performs the all-important job of keeping the silt out of the lake and it makes the area attractive for visitors. Even with heavy use, the land is much better protected than it used to be."

Hunters, bird-watchers and hikers make good use of trails winding through the wooded hills surrounding the lake.

Soil Conservation Service photo



Soil Conservation Service photo

The Senger family: Earl, Mrs. Senger, Kenneth, and Harlen. They operate their 500-acre recreation area as a family team.

Local people are limited to family memberships priced at \$12 annually. They number about 100 a season. Out-of-state tourists are welcomed to camp or use the trailer park by the day or week. Lake privileges are included with their 50¢ a head daily fee.

Senger donates the lake facilities to local scout troops for spring and fall weekend camporees and has hosted mid-summer encampments of the Washington, D. C. Scout Council at a special price.

"The combined tree farming-recreation idea seems to work fine," says Senger. "We do our woodland management work in fall and winter. That leaves the summer free for the recreation business. It's a big investment and we keep busy all year but we're sure we'll make a fair profit as the business grows."

"The real payoff to me, though, is the satisfaction of knowing that these mountain streams have been harnessed to stop floods and turn the water resources to benefits that will make our community a better place in which to live."

A picture window view from above Senger Mountain Lake. "The real payoff—a better place to live."

Soil Conservation Service photo



THE MUSKRAT

WILDERNESS CREATURE
OF MANY NAMES

By JACK H. MAXWELL

HAVE you ever accompanied a woman shopping for a new fur coat? Then you may have been asked what you thought of "Hudson Seal," "Plucked Beaver," "Velvet Coney," "Wallaby," "Moleskin," and other such outlandish names for various kinds of furs. Well, if it is any consolation to you, all the furs so eloquently named above are actually from a single species of furbearer—that old swamp-dweller, the muskrat!

This one species makes up nearly three-fourths of the total fur yield of North America, and about half of the total fur income.

Muskrat, mushrat, musquash, muskbeaver, ondatra, mudcat—these are some of his names. In Europe, where he has been imported and has proven highly destructive, he may have some other less complimentary names as well. In any case, his official name, first given him by Linnaeus, the famous Swedish naturalist who named many of the animals of the world, is *Ondatra zibethica*. *Ondatra* is the Indian name of this fellow, and *zibethica* is derived from the root of "civet" or muskcat of the Old World—this for his musky odor. He is of the order *Rodentia*, the gnawers, the sub-order *Myomorpha*, the mouse-like rodents, and the family *Cricetidae*, the meadow mouse family. This is probably the best description of him—he is nothing but a big, over-grown meadow mouse!

Weighing from two to three pounds, and measuring some 18 inches overall, with a vertically flattened tail comprising about one-third of his length, the muskrat is simply a big meadow mouse, admirably suited for an aquatic existence. His luxuriant, soft, thick coat is essentially waterproof. Overlain with long, oily guardhairs, which he takes great pains to keep clean, this fine fur is, at one and the same time, his best defense and his worst enemy. Its superb ability to keep him dry and warm is also its primary attraction to ladies of fashion and thus to trappers.

Further evidence of his aquatic adaptation are his webbed hind feet, which propel him swiftly through the water but are of little help on land. His tail serves as an efficient rudder, by alternately opposing the thrust of each hind foot, keeping the muskrat swimming on a straight course. He is able to outdive his arch enemy, the mink, and seldom strays far from the water's edge, since he is so clumsy on land.



His webbed hind feet propel him swiftly through the water while his vertically flattened tail serves as an efficient rudder.

His musky odor comes from perineal glands near the base of his tail. This musk is not so offensive as that of the skunk, and is sometimes used in the preparation of perfumes. Its chief use is to identify members of the family and to mark the home territory.

With the possible exception of the red fox, no other animal in North America has such an extensive range as the muskrat. He is found from the Arctic Ocean to the Gulf of Mexico, and from the Atlantic to the Pacific. Only in a few, ever-diminishing spots is he missing. However, in certain of his former strongholds (especially Louisiana), the nutria, a large, South American counterpart, is steadily encroaching, and said to be replacing the muskrat in some areas.

The muskrat's particular niche in the outdoor world, according to American Indian legend, was given to him by their sun god, Nanabojou. It seems that the muskrat had aided the god in a flood "once upon a time," and the god in his gratitude stated that the muskrat might choose anywhere

(Continued on next page)

The muskrat spends little time on land by choice, but when he does walk on a muddy shore his oversized and heavily clawed hind feet, his tiny front feet, and his dragging tail leave a distinctive trail.



Muskrat (Continued)

in the world to live. Being of an indecisive nature, the muskrat first chose the water, and then the land as his home. The god, noting his indecision, stated that henceforth the muskrat should dwell in that part of the world which is both land and water—the swamps and marshes. Here the muskrat builds his crude home, which resembles for all the world a motley heap of reeds and stems. After he has piled up material for his home, the muskrat eats out a cavern or chamber, connects it to the water with tunnels that exit underwater, and here escapes the cold, his enemies and the trapper. He also builds smaller heaps as feeding platforms in strategic locations throughout his soggy domain.

Wherever the muskrat is found, he must still carry out his duties, doing his part to perpetuate the species. So, especially in the spring, and throughout the year in southern climes, he seeks out a female, mates with her, and thus renews the endless chain of the muskrat species. From three to nine hairless, blind kits, weighing about an ounce and approximately four inches long, are born to the female in about 30 days. These open their eyes in 13 to 16 days, and 10 days later are weaned, able to swim and dive, and beginning to make their way in the world. Soon after this, the mother drives them out of the nest to prepare for still another brood. She normally has three litters each year, and sometimes four or five, especially in the more favorable climates.

While a new-born kit's diet consists principally of milk, the taking of which is aided by a diamond-shaped cleft in the milk teeth which disappears later, most muskrats feed on succulent reeds, lilies, stalks and roots of cattail and other such growth. In fact, almost anything green may suit their taste at times. Clams, frogs, crawfish and fishes may supplement their vegetable diet, but this is not to suppose that the muskrat is able to actually catch fish, but will pick up those found freshly dead.

Muskrats have many natural enemies, such as the mink, the hawk and the snapping turtle, but the most devastating enemy of all is a severe winter following a dry autumn. This combination of weather factors strikes a double blow at muskrats. Not only are they deprived of water for protection and food seeking, but what little water there is may be frozen solid, sometimes even trapping them in their dens to starve.

He is a big, over-grown meadow mouse, admirably adapted to a semi-aquatic existence.

Virginia Wildlife Research Unit photo by Mosby



Man and his trapping operations are, of course, part of over-all limiting factors of a muskrat population. However, only a foolish and greedy trapper would take an entire colony of "rats," not leaving a sufficient breeding population. His objective is substantially the same as the muskrat's—a healthy, balanced population, yielding the best furs and the most money.

As was mentioned earlier, the nutria is moving in on the muskrat in some areas. This large cousin of the muskrat, *Myocastor coypus* by name, may be 30 to 42 inches long, and may weigh up to nine pounds. Its scientific name means "mouse beaver," but its fur is somewhat less desirable than that of the muskrat.

Another cousin is the Florida water rat, *Neofiber alleni*, found only in this semi-tropical peninsula. It is smaller, 13 to 15 inches overall, and its tail is round rather than vertically flattened. Its Latin name means "new beaver," but it is too small to be worth trapping for fur.

In summary, we find the muskrat to be a large, aquatic meadow mouse with many enemies; able to survive by its high reproductive capacity; and valuable to man for its splendid fur. We can best help its kind by preserving or restoring a favorable habitat, by providing an adequate food source and by taking a balanced harvest of furs.

Reprinted from *West Virginia Conservation*, January 1964, courtesy of West Virginia Department of Natural Resources.

Springtime Turkey Hunting

(Continued from page 7)

2. A spring gobbler season is the best way in which to remove excess toms without affecting the nesting hen populations.

3. A spring gobbler season will help in removing some of the old toms who have exclusive breeding rights, thereby allowing younger toms to do some of the breeding. This introduces new stock into a flock and results in an improving, healthy flock.

4. Spring gobbler hunting affects neither spring breeding and nesting nor fall hunting.

5. Spring gobbler hunting will bring us a step closer to the primary aim of full utilization of a natural resource without causing an adverse effect on that resource.

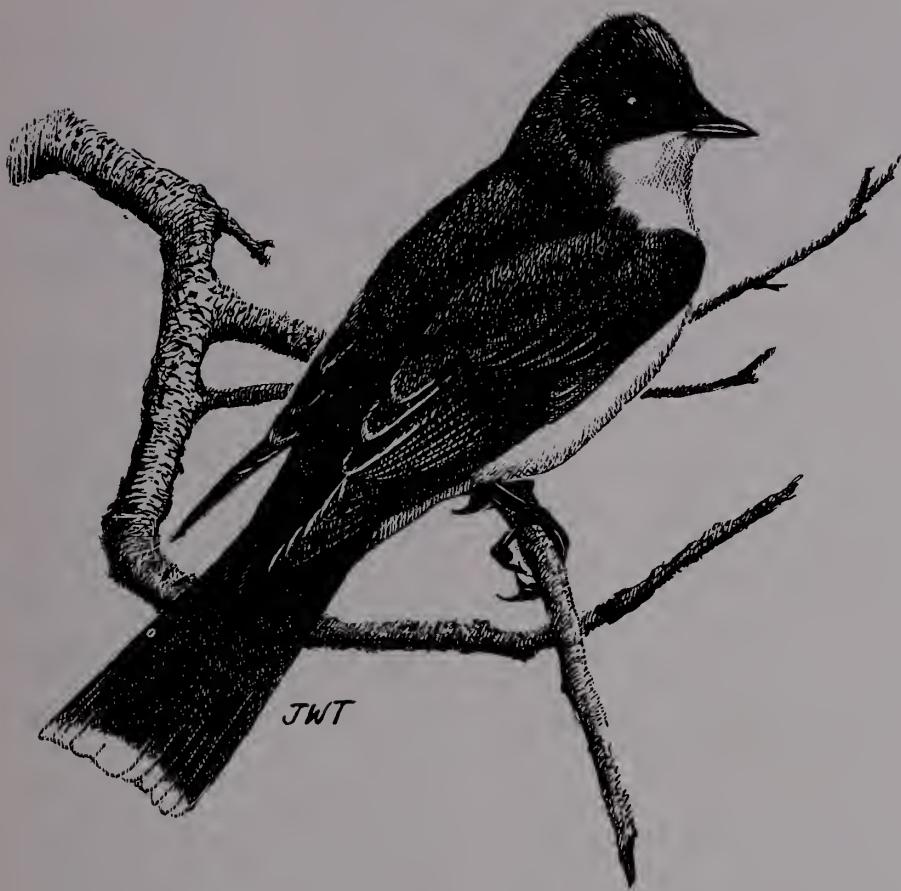
6. Spring gobbler hunting will provide an additional hunting season for the sportsman.

7. Spring gobbler hunting will not materially affect the numerical harvest of turkeys in a given year but it will provide a more selective harvest which will be an invaluable tool of game management.

And so it was that, after careful consideration of all the factors involved and all the information available from those states that have spring gobbler seasons, the recommendation was made to the Colorado Game, Fish and Parks Commission that it consider setting a spring gobbler season.

The commission has given a bonus of mouth-watering proportions to the true sportsman. It will be one of the most demanding types of hunting in which the hunter must bring to bear every facet of his skill and knowledge.

With a spring gobbler season, the turkey "yelper" will take its place alongside the shotgun as one of the two most important pieces of equipment for success.



*Bird
of the
Month:*

Kingbird

By J. J. MURRAY
Lexington

THE kingbird is one of our most familiar birds. Throughout the South it is known to every country boy as the "beemartin" because it is supposed to feed largely on bees. This has turned out to be a case of giving a dog a bad name and hanging him. It is true that the kingbird will sometimes eat bees, but this is not a common habit. The workers on food habits in the Fish and Wildlife Service have shown that this is an almost negligible factor in bee raising. For one thing, an investigator learned that out of 281 kingbird stomachs analyzed only 14 contained honey bees and that of the 50 bees found in these stomachs 40 were drones. Furthermore, he discovered in these stomachs 17 robber flies, an insect which preys on honey bees.

Such evidence indicates how complex are the economic relationships of any bird or any other living creature and how risky it is to call any creature "bad," or even "good," in the economic sense. The kingbird also eats wild berries and seeds along with its main food of flying insects caught on the wing.

About another habit of the kingbird there can be no question. If a pair nests near a barnyard, no hawk will dare come around during the summer sojourn of these birds. It is well named "kingbird," for it is monarch of all it surveys. To see a pair of them take a red-tailed hawk to ride is a comical sight. Uttering fierce cries of battle, the kingbird rushes to the attack. It is so agile that the larger

bird has no defense but flight, the kingbird keeping up the attack until the hawk is out of sight.

It seems to have a special hate for cows. If a cow comes in sight, it is soon put to flight. Sometimes the kingbird will actually land on the cow's back and stab at its head. Once while watching a cow annoy a red-tailed hawk I saw a kingbird get in the act. He first attacked the hawk, practically riding him until he drove him away. Then he turned his attention to the cow, which soon fled, to be followed by the angry kingbird until both were out of sight.

Size seems to be of small concern to the kingbird in his chases. I have seen it attack American egrets, turkey vultures, killdeers, purple grackles. They are said to be unsuccessful in handling a Baltimore oriole; as to that I do not know. I have seen them nesting peacefully in the same tree with both Baltimore and orchard orioles.

The outside of a kingbird's nest may seem rather untidy, but the inside is beautifully finished. Where sheep occur, the nest is usually lined with wool. The bird nests in a variety of trees and at any altitude from 10 to 80 feet. In the Valley it is partial to sycamore trees.

The usual clutch is of three or four eggs, laid from late May to early July. While his mate is brooding the male kingbird is always near and on guard, sitting on an open perch where he can wait the coming of any foe.



Edited by HARRY GILLAM

The Appalachian Trail

How about taking a hike this summer? Hiking can be fun if you know the ropes. The Appalachian Trail, with its changing zones of plant, animal, and bird life and side trails inviting exploration, provides some of the best hiking in the country. The trail is well designed for foot travel. Along its route a person can take an hour's walk, a full day's hike, or an extended excursion.

Maps showing the route of the trail in Virginia may be obtained from Forest Supervisor, George Washington National Forest, Harrisonburg, Virginia.

An illustrated brochure that has a number of handy tips and safety suggestions for trail hikers may be obtained by writing Forest Service, U.S. Department of Agriculture, Washington, D. C. 20250.

Mid-Atlantic Coast Shows Clam Potential

A cooperative survey by the U. S. Bureau of Commercial Fisheries and the Surf Clam Industry has revealed the existence of heretofore unknown surf clam concentration off the Maryland-Delaware coast. The five minute tows brought up about three bushels of surf clams each in shallow areas and up to five bushels of black quahog clams in deeper waters offshore. Bureau personnel from Gloucester, Massachusetts, Exploratory Fishing Base and the Franklin City, Virginia, Field Station participated in the survey.

Trumpeter Rearing Successful

Thirty trumpeter swan eggs were removed from nests on the Red Rock Lakes National Wildlife Refuge, Montana, during the summer and placed in a special incubator at refuge headquarters. Sixteen of the eggs hatched and all sixteen cygnets were reared to adult size. The work was done to obtain information on the artificial rearing of trumpeter swans and solve other problems connected with the life history of these birds.

Rapid ID System For Birds Developed

A new book, *Naming the Birds at a Glance*, published by Alfred A. Knopf, Inc., 501 Madison Avenue, New York 22, New York, offers a new approach to rapid bird identification. The author, Randolph Jenks, first assists the reader in grouping the birds seen into look-alike groups, then proceeds to separate these by readily discernible color patterns and markings. Stressed in the 331 page publication are colors and patterns that remain with the observer after a bird flashes away.

The book is limited to land birds found from South Carolina west to the Rockies and north to the Arctic. It sells for \$3.95 and is available from the publisher or local book stores.

Tree Fruits Major Wood Duck Food

Analyses of 170 wood duck stomachs from birds taken by hunters on Lake Marion, South Carolina, in November and December 1961 revealed that tree fruits made up 92 percent of the volume of the foods eaten and occurred in 78 percent of the stomachs. Acorns, most of which were from water oaks and pin oaks, made up 58 percent of the total, followed by bald cypress fruits at 18 percent, sweetgum at 8 percent, water hickory at 5 percent, and hawthorne at 2 percent. Lesser quantities of ash, blackgum, possumhaw, American hornbeam, pine, and waxmyrtle fruits were present.

With the present acceleration of timber stand improvement practices on the southeastern National Wildlife Refuges, this information will be of considerable value in guiding the Service's forestry program to the ultimate benefit of the waterfowl resource.

Booklet Offered Young Hunters

Fathers, mothers, hunter safety instructors, camp counselors, Boy Scout leaders—in fact anyone interested in helping young hunters understand the sportsmanship ethic of hunting—should welcome "For the Young Hunter," now available without charge from the Con-

servation Department, Olin, East Alton, Illinois.

Issued originally as seven separate articles on the hunting ethic in "News From Nilo," their enthusiastic reception has prompted publication in a single booklet. Companions, dogs, equipment, outdoor lore, gunmanship and other topics are covered. Limited quantities are available from Olin.

Report Acid Mine Pollution

Personnel of the Bureau of Sport Fisheries and Wildlife in cooperation with the States have been conducting a survey of potential fishing waters deterioriously affected by acid discharge from mining operations in the United States. To date, reports have been received from 42 states including most of the states in which acid mine pollution is a problem.

It was found that acid mine pollution has resulted in the elimination or severe depletion of the fish populations in 5,959 miles of streams and 11,687 acres of impoundments. About 97 percent of the acid mine pollution reported for streams and 91 percent of that reported for impoundments resulted from coal-mining operations. Pennsylvania and West Virginia contain two-thirds of the stream mileage and 90 percent of the impounded waters so affected.

Last Chance Gobbler



J. W. Morris, Jr., of Burkeville bagged this beauty on the last day of the fall turkey season in Nottoway County. The 17 pound gobbler sporting an 11 inch beard was Morris's first turkey.



YOUTH AFIELD



Edited by DOROTHY ALLEN
Entomologist Lohr



Stephen Lohr with part of his insect collection.

Stephen Lohr, a 17-year-old Madison County 4-H Club member, who became interested in entomology four years ago, won a \$500 scholarship and national recognition at the 42nd National 4-H Club Congress when it was held in Chicago in December.

His work on his project included collecting, mounting and identifying 700 species in 22 orders of insects; helping to organize an entomology club in his community; teaching his specialty at the State 4-H Short Course two years, and teaching entomology at the conservation Nature Camp.

In addition, he has planned 12 local entomology programs and one state program, has given 59 demonstrations and several radio programs and talks, and has prepared 52 exhibits.

His first interest was aroused when his older brother, Gordon, returned home from Nature Camp in 1959. His interest was quickened by realizing the value of a knowledge of entomology on the farm where he lives with his parents.



Commission photo by Kesteloo

Wild mushrooms can be found almost anywhere in Virginia fields and woods. The bonanza mushroom season is during the warm and wet summer days. The choicest kinds are not from the supermarket but from nature where anyone can pick them freely. The only safe way to collect mushrooms for eating is to first learn all you can about them. Learning to identify mushrooms is a fascinating hobby that pays off in true delicacy. Nothing compares with the special taste of well prepared young, fresh wild mushrooms from the fields and woods.

Summer Bonanza

Things To Do With Fungi

1. Make Spore Prints of Mushrooms.

Collect various kinds of fresh mushrooms in good condition. If they have stems, remove them carefully. On the underside of the cap are thin plate-like strips called gills. Place the cap, gill side down, on a piece of paper; cover it with a bowl or pan; and leave it for several hours. The gills may be different in color in different kinds of mushrooms. This color is usually caused by the spores which are formed on the gills. If the gills appear white, the spores will probably be white; so the best results would be obtained by putting this cap on dark paper. When the cap is removed, a pattern will be visible. It has been formed by the masses of spores that have fallen from the gills.

2. Collect Bracket (Shelf) Fungi and Puffballs.

The bracket fungi that occur on dead and living trees can be collected and examined. Notice that the undersides of some are smooth, some have jagged toothlike projections, and some have pore-like surfaces. Cut across one of the larger woody ones and notice the layers.

Find puffballs in various stages of development. When young they are white, becoming brown often with a definite hole in the top as they age. When dry, squeeze them and watch the cloud of spores "puff" out.

4-H Food Strip Winners



Abingdon Journal Virginian photo

A. C. Hutton, Jr., left, president of the Washington County Sportsmen's Club, is shown presenting a trophy to the top 4-H Club school winner Charles Quertermous, president of the Patrick Henry 4-H Club. His school had the best food strip of all the participating schools in the county. In the background (left) is Charles Allen Campbell of the Abingdon High 4-H Club, who was first place winner with the best individual food strip. Campbell received a check for \$25.00. Second place winner with a check for \$15.00 was Eddie Bailey, not shown. Third place winner Harold Counts (back, right) received a check for \$10.00. We congratulate these boys on a very excellent job.

Last winter the Washington County Sportsmen's Club decided the best project the club could undertake was the wildlife food strip contest. This contest was worked out with the Washington County Assistant Agent, John Shryock, and Washington County Game Warden Ernest Yeatts.

The contest was open to all 4-H Club members in the county. About fifty boys signed up to enter and the project was well underway with food strips being scattered to every community in the county. A later check proved that only about 25 of the fifty that signed up actually got their food strip planted in time. However, in these 25 were some very good strips considering the bad growing season throughout the area.



Commission photo by Kesteloo

ON THE WATERFRONT



Edited by JIM KERRICK

Cool, Fresh Water

The "Water For Living" flask will produce six gallons of safe, pure drinking water from any questionable water source, except salt water. Figuratively speaking, a person can now carry six gallons of safe drinking water in his jacket pocket.

Pollution is rapidly becoming a national problem. Safe drinking water, away from treated municipal sources, is actually getting scarce. This is especially true for those millions of people who are spending more and more time in outdoor recreation, traveling far from home in the pursuit of hunting, fishing, hiking, boating and other sports. But with this flask, any creek, stream, river or pond, however polluted or dirty looking it may be, becomes a source of safe drinking water. It has been extensively tested.

Today 90 per cent of Americans participate in some form of outdoor recreation. Many are traveling in foreign countries where water supplies are suspect. Others, traveling into the rural areas of America and even Canada, are finding that once-trusted drinking sources are now polluted or questionable because of nearby human habitation.

This flask assures the traveler, outdoorsman, construction worker, sportsman, the picnicking family a safe, clean, clear, pure glass of water free from heavy chemical taste. For families that live in flood danger areas, hurricane belts and other major storm spots, this flask is insurance against sickness, even death, from drinking polluted waters which nearly always accompany such disasters. Since the ingredients will also remove radioactivity, it is an essential item for fallout protection.

In using this flask you will discover the convenience of its compact size and light weight. There are not parts to wear out or replace, and it can be stored indefinitely without deterioration or depletion of contents.

To use the flask, simply empty the contents of the foil packet into the flask. The combination of Ion Exchange Resin and purification material will kill harmful bacteria without imparting the harsh chemical taste of chlorine and similar materials used up to now. Fill the flask with water from any source. Wait five minutes for the Ion Exchange and purifying action to take place. Move the locking spout to open position and pour a filtered, clean-tasting, pure glass of water. You will find that the flask works best if slightly inverted and squeezed. Refill as often as necessary. One resin charge will treat the contents of the flask approximately 48 times. The Ion Exchange Resin will change color (from dark blue to light yellow) when exhausted.

For further information contact your local sportsmen's shop or write directly to General Ionics Corporation, 101 Terence Drive, Pittsburgh, Pennsylvania 15236.



Photo courtesy General Ionics Corp.
The unbreakable polyethylene flask comes complete with leak-proof, locking cap and integral replaceable filter elements.

Small Boat Equipment

A six-year-old boy lost his life while boating because he was not wearing a life preserver. In this instance common sense should have been used and the boy, even though he could swim, should have been wearing some type life saving device. The law states that every motor-

boat shall be equipped with or carry at least one life saving device for every person on board.

DO YOU have sufficient life saving devices for all members of your family and friends when you go boating? ARE YOUR life saving devices in good condition and are they Coast Guard approved? Now is the time for you to make certain.

No matter what the classification of your boat is you are required during the period of sunset to sunrise to exhibit certain lights. Is your boat equipped with the required lights? If you are in doubt, contact your local game warden or communicate directly with the Virginia Commission of Game and Inland Fisheries for information.

Every motorboat of Class 1, 2 and 3 shall be provided with an efficient whistle or other sound producing mechanical appliance. Do you have a sounding device on board your boat?

If you have an inboard motor on your boat, remember, the carburetor of every engine (except outboard) using gasoline as fuel must be equipped with a flame arrestor or backfire trap. Have you checked to see if your inboard engine has a flame arrestor on the engine, NOT just in the boat?

Let's all set aside one day prior to the boating season and check all of our boating equipment. Don't wait until the morning of the day you plan on using your boat.

One last reminder. Is your boat properly registered and do you have the Registration Card on board?

Have a safe boating season.

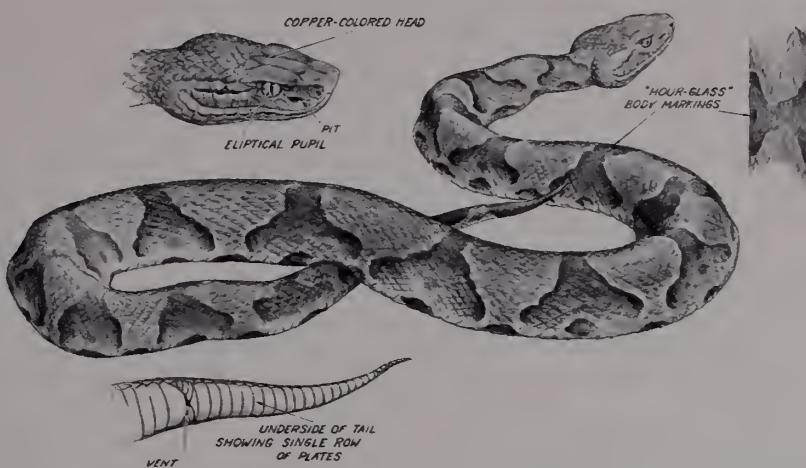
"Thar She Blows"

The fuel lead-in hose from the gasoline tank to the motor had a pin hole in it allowing gasoline to leak out and down into the bilge. When the motor was started an explosion resulted and the two boat occupants were blown overboard. One died from drowning; the other, from the explosion.

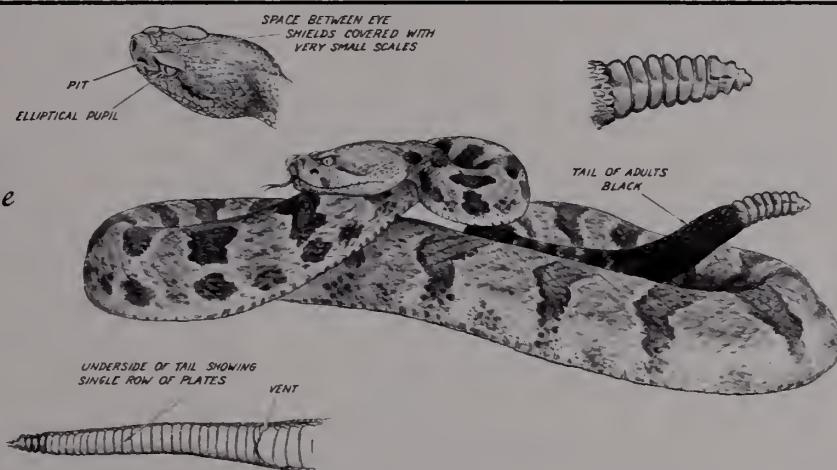
“Don’t Tread On Me”

Virginia has just three recognized species of poisonous snakes. It is well to learn to identify and avoid them.

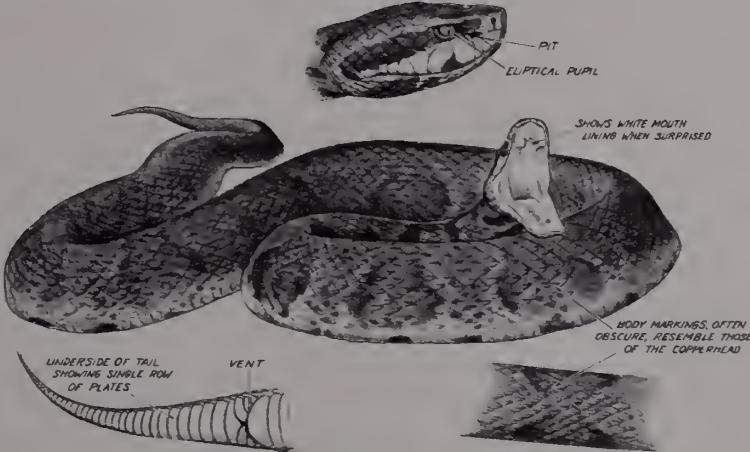
Copperhead



Rattlesnake

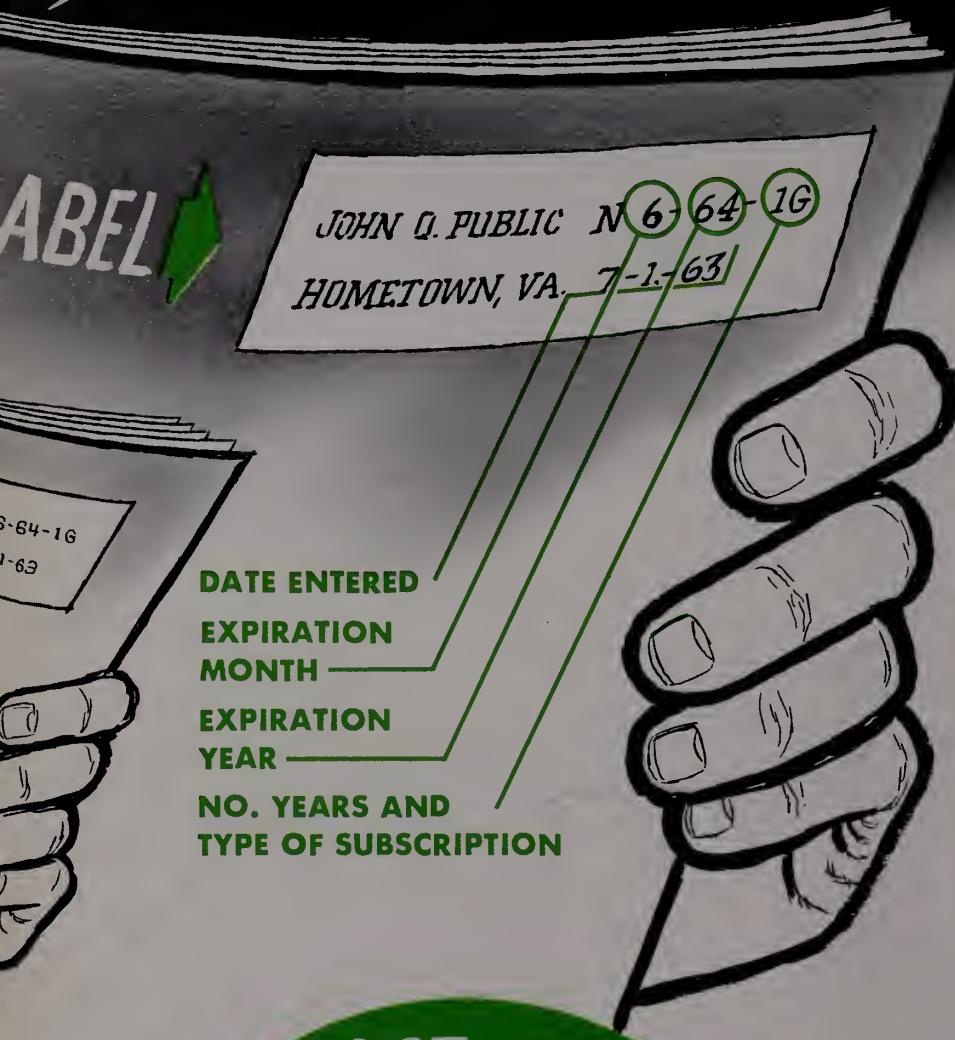


Cottonmouth
Moccasin



The best precaution against snakes is a pair of leather or rubber boots, heavy pants, and normal caution. Look where you step. Never step over a log—step on it, look around and step down. Caution is the best snake-bite preventative.

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